



## Inland wetlands/water: Inland emergent wetland

### Description

Inland emergent wetlands, also called marshes, are frequently or continually inundated with water and are characterized by emergent herbaceous vegetation adapted to saturated soil conditions. These wetlands tend to have abundant nutrients and are highly organic. Inland emergent wetlands are quite varied and can be found in poorly drained depressions and along lakes, ponds, and rivers.

### General Condition of Feature

Most of the inland emergent wetland area in the Northern Lower Peninsula is considered to be in fair to good condition (~70%). Most of the remaining areas are considered degraded or very degraded (25%). Specific inland emergent wetland natural communities are considered rare, uncommon, imperiled, or critically imperiled in the State.

### Associated Natural Communities

Coastal Plain Marsh  
Emergent Marsh

Intermittent Wetland [Boggy Seepage Wetland]  
Northern Wet Meadow

### Associated Species of Greatest Conservation Need

#### SNAILS

six-whorl vertigo (*Vertigo morsei*)

#### CRAYFISH

devil crawfish (*Cambarus diogenes*)  
digger crayfish (*Fallicambarus fodiens*)

#### INSECTS

sedge darner (*Aeshna juncea*)  
spatterdock darner (*Aeshna mutata*)  
zigzag darner (*Aeshna sitchensis*)  
Hine's emerald dragonfly (*Somatochlora hineana*)  
3-striped oncocnemis (*Oncocnemis piffardi*)

#### AMPHIBIANS

blue-spotted salamander (*Ambystoma laterale*)  
eastern tiger salamander (*Ambystoma tigrinum tigrinum*)  
Fowler's toad (*Bufo fowleri*)  
western chorus frog (*Pseudacris triseriata triseriata*)  
pickerel frog (*Rana palustris*)  
northern leopard frog (*Rana pipiens*)

#### REPTILES

blue racer (*Coluber constrictor foxii*)  
eastern fox snake (*Elaphe gloydi*)  
black rat snake (*Elaphe obsoleta obsoleta*)  
eastern hognose snake (*Heterodon platirhinos*)  
smooth green snake (*Liochlorophis vernalis*)  
queen snake (*Regina septemvittata*)  
eastern massasauga (*Sistrurus catenatus catenatus*)  
spotted turtle (*Clemmys guttata*)  
Blanding's turtle (*Emydoidea blandingii*)  
wood turtle (*Glyptemys insculpta*)  
eastern box turtle (*Terrapene carolina carolina*)

#### BIRDS

Trumpeter Swan (*Cygnus buccinator*)  
American Black Duck (*Anas rubripes*)  
Blue-winged Teal (*Anas discors*)  
Pied-billed Grebe (*Podilymbus podiceps*)  
American Bittern (*Botaurus lentiginosus*)  
Black-crowned Night-heron (*Nycticorax nycticorax*)  
Northern Harrier (*Circus cyaneus*)  
Red-shouldered Hawk (*Buteo lineatus*)  
Yellow Rail (*Coturnicops noveboracensis*)  
King Rail (*Rallus elegans*)  
Virginia Rail (*Rallus limicola*)  
Sora (*Porzana carolina*)  
Common Moorhen (*Gallinula chloropus*)  
American Coot (*Fulica americana*)  
Spotted Sandpiper (*Actitis macularia*)  
Wilson's Snipe (*Gallinago delicata*)  
Wilson's Phalarope (*Phalaropus tricolor*)  
Forster's Tern (*Sterna forsteri*)  
Black Tern (*Chlidonias niger*)  
Short-eared Owl (*Asio flammeus*)  
Olive-sided Flycatcher (*Contopus cooperi*)  
Purple Martin (*Progne subis*)  
Sedge Wren (*Cistothorus platensis*)  
Marsh Wren (*Cistothorus palustris*)  
Louisiana Waterthrush (*Seiurus motacilla*)  
Savannah Sparrow (*Passerculus sandwichensis*)  
Bobolink (*Dolichonyx oryzivorus*)  
Eastern Meadowlark (*Sturnella magna*)  
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)

#### MAMMALS

water shrew (*Sorex palustris*)

### Associated Threats

#### MODIFICATION OF NATURAL PROCESSES

- Altered hydrologic regimes

#### HABITAT CONVERSION

- Industrial, residential, and recreational development: Development in adjacent uplands may alter water flow and affect runoff. A lack of buffer zones exacerbates this effect.
- Wetland modifications
- Dredging and channelization

*POLLUTION*

- Urban, municipal, and industrial

*NON-CONSUMPTIVE BIOLOGICAL RESOURCE USE*

- Non-consumptive recreation: Day use of kayaks and jet-skis may impact emergent wetlands.

*BIOLOGICAL INTERACTIONS*

- Invasive plants and animals: Species like purple loosestrife (*Lythrum salicaria*) and phragmites (*Phragmites australis*) may affect community composition.

Conservation Actions Needed [Threats addressed]

*LAND & WATER PROTECTION*

- Expand conservation easement programs [variety of threats]
- Support and expand conservation purchase of high quality occurrences [variety of threats]

*LAND, WATER & SPECIES MANAGEMENT*

- Manage to approximate natural disturbance regimes using restoration of water flow patterns. [Altered hydrologic regimes]
- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals]
- Provide contiguous dry and mesic grassland areas of at least 250 acres. [Habitat Conversion—multiple]
- Support Landowner Incentive Programs to foster conservation on private land [variety of threats]
- Maintain or establish riparian buffers of at least 50 ft., but 500 ft. or wider maximizes conservation benefits [wetland modifications]

*LAW & POLICY*

- Work with municipalities to promote planning and zoning insuring adequate protection for emergent wetlands and adjacent uplands. [Industrial, residential and recreational development; Wetland modifications]
- Develop and enforce regulations to curtail recreational activities that cause significant damage. [Non-consumptive recreation]
- Develop new and enforce existing regulations restricting emissions which contribute to acid rain. [Urban, municipal, and industrial pollution]

*RECREATION*

- Promote responsible watercraft use. [Non-consumptive recreation]

Research and Survey Needs

- Conduct a statewide wetlands inventory.
- Evaluate the impacts of modifications of natural hydrologic regimes and local water chemistry.
- A common classification system to define wetlands is needed.
- Determine the effects of microtopography on wetland function and its impact on wetland restoration.
- Evaluate the role of managed wetlands in contributing to landscape diversity. How do flooded cornfields impact diversity? Is there a difference in wildlife value between intensive wetland management and passive wetland management?
- Assess the influence of wetland creation by beavers. Do these impacts vary regionally?
- Quantify differences in wildlife value of restored wetlands and natural wetlands.
- Document the historic and current range of variation between emergent wetlands. This includes variables such as species composition and size.
- Identify invasive species that may degrade the value of emergent wetlands for wildlife. Develop techniques to control invasive species. Common invasive species include phragmites (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*) and reed canary grass (*Phalaris arundinacea*).

Monitoring

- Track emergent wetland acreage and distribution across the landscape.
- Identify and track floristic composition and diversity.
- Track water level and flow fluctuations and its impacts on vegetation and wildlife.